
A BILL FOR AN ACT

RELATING TO OMNIBUS HAWAI'I RESILIENCE AND SUSTAINABILITY
STRATEGY.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

PART I

SECTION 1. The legislature finds that Hawai'i needs a new way of thinking about how the State addresses critical infrastructure needs through the development of public-private partnerships that are specifically focused on research and development. The legislature's role is to create the environment for attracting partners with resources, technical expertise, and the willingness to develop an offshore high technology park that integrates state-of-the-art communications platforms, big data analytics, and unmanned aerial vehicles.

In 2008, the State unveiled the *Hawai'i 2050 Sustainability Plan*, which was written by the Hawai'i 2050 Sustainability Task Force comprised of state and county government officials, University of Hawai'i representatives, and private industry representatives. The task force asked the following guiding questions: What do the people of Hawai'i want for the future of our islands in the 21st century? What is the community's will



1 for the future of our economy, society, and environment? What
2 steps can we take now to achieve that preferred future for our
3 children and their children? Similarly, the intent of this Act
4 is to focus on an updated strategy to achieve a sustainable and
5 resilient Hawai'i in the long term.

6 The purpose of this Act is to make appropriations for a
7 Hawai'i resilience and sustainability strategy in the areas of
8 broadband and joint emergency management.

9 PART II

10 SECTION 2. The legislature finds that the benefits of
11 broadband internet access include:

- 12 (1) Access to all types of information within a few
13 keystrokes, whether this information is to learn a new
14 skill, learn a new language, or complete an online
15 course. Broadband facilitates the rapid access of
16 information in many different forms;
- 17 (2) Economic development to accelerate business
18 development and provide new opportunities for
19 innovation, expansion, and e-commerce. Communities
20 that connect their residents create wealth and attract
21 business investments;



1 (3) Public safety to connect first responders in an
2 emergency and allow emergency workers to communicate
3 across disparate networks, between jurisdictions, and
4 across different agencies, which are critical
5 capabilities at the scene of an emergency. Police,
6 fire, and emergency medical personnel can react to
7 crises quickly, fostering cooperation among numerous
8 public safety agencies;

9 (4) Facilitation of healthcare delivery and creation of
10 opportunities such as telemedicine for doctors and
11 healthcare specialists to work together as a virtual
12 team, with specialists located in any part of the
13 world. A family practitioner in a small rural town
14 can send medical images of a patient to a specialist
15 in any part of the world for an instant expert
16 consultation. Test results from a hospital emergency
17 room or laboratory can be sent to a radiologist or
18 doctor in seconds, making rapid diagnosis a reality.
19 Doctors are also now sending prescriptions directly
20 from their offices to pharmacies, greatly reducing
21 errors, with automatic checking for interactions;



- 1 (5) Enhancement of and greater equity of access to
2 educational resources. Children in inner city
3 neighborhoods, affluent homes, and farm communities
4 can all access the same resources. Scarce textbook
5 materials can be replaced with online resources, and
6 children can access all of these materials from school
7 and home;
- 8 (6) Improved communications, which can improve people's
9 professional and personal lives and increase
10 participation by people with disabilities. Broadband
11 empowers people with disabilities and removes barriers
12 that keep them from participating in everyday
13 activities;
- 14 (7) Enhanced telecommuting because broadband enables
15 people to work from home, saving time, reducing
16 expenses, and easing traffic congestion. Employers
17 have been encouraging this concept to save overhead
18 expenses and improve employee satisfaction; and
- 19 (8) Enabling of smart grid technology, which enables
20 homeowners to monitor energy usage in real time and



1 adjust usage patterns to save energy costs and aid in
2 conservation efforts.

3 SECTION 3. There is appropriated out of the general
4 revenues of the State of Hawaii the sum of \$ or so
5 much thereof as may be necessary for fiscal year 2015-2016 and
6 the same sum or so much thereof as may be necessary for fiscal
7 year 2016-2017 for the Hawai'i broadband initiative, which
8 explores how a public-private partnership can deliver overall
9 projects through research and development.

10 The sums appropriated shall be expended by the department
11 of business, economic development, and tourism for the purposes
12 of this Act.

13 SECTION 4. The director of finance is authorized to issue
14 general obligation bonds in the sum of \$ or so much
15 thereof as may be necessary and the same sum or so much thereof
16 as may be necessary is appropriated for fiscal year 2015-2016
17 for the design, construction, and materials for broadband cable
18 landing sites and for the preparation of environmental impact
19 statements for seven of those sites as follows: two sites on
20 O'ahu and one site each on Kaua'i, Maui, Moloka'i, Lana'i, and
21 Hawai'i.



SECTION 5. The appropriation made for the capital improvement project authorized by section 4 of this Act shall not lapse at the end of the fiscal biennium for which the appropriation is made; provided that all moneys from the appropriation unencumbered as of June 30, 2018, shall lapse as of that date.

7 PART III

SECTION 6. The director of finance is authorized to issue general obligation bonds in the sum of \$ or so much thereof as may be necessary and the same sum or so much thereof as may be necessary is appropriated for fiscal year 2015-2016 for the planning, land acquisition, design, and construction of a joint emergency management center in Mililani high technology park to house state and city and county of Honolulu emergency management operations.

16 SECTION 7. The appropriation made for the capital
17 improvement project authorized by this part shall not lapse at
18 the end of the fiscal biennium for which the appropriation is
19 made; provided that all moneys from the appropriation
20 unencumbered as of June 30, 2018, shall lapse as of that date.



1

PART IV

2

SECTION 8. This Act shall take effect on July 1, 2050.



Report Title:

Hawai'i Resilience and Sustainability Strategy

Description:

Makes various appropriations for the Hawai'i resilience and sustainability strategy. Effective 7/1/2050. (SD2)

The summary description of legislation appearing on this page is for informational purposes only and is not legislation or evidence of legislative intent.





**COMMANDER, U.S. PACIFIC COMMAND
(USPACOM)
CAMP H.M. SMITH, HAWAII 96861-4028**

February 23, 2015

State of Hawaii Legislature
415 South Beretania Street
Honolulu, HI 96813

Dear Mr. Chairman:

We concur with Hawaii's effort to provide more secure, reliable, and resilient Internet and data connectivity. Increased broadband capacity on the island is crucial to USPACOM's ability to command and control forces across the Asia-Pacific, especially with the increasing amount of data that must be transferred.

The John Hopkins University Applied Physics Laboratory completed a study in 2011 and determined that Trans-Pacific submarine cables are currently in unsecured, publicly accessible areas, and highly vulnerable to accidental or intentional damage. The study also concluded that by 2020 required data throughput capacity will exceed available Trans-Pacific submarine cables bandwidth, ultimately affecting users throughout Hawaii and the Asia-Pacific.

Technology now allows for installation of new resilient Submarine Fiber Optic (SFOC) which has the capability to bypass Hawaii entirely. Robust broadband is the communication backbone for our 24-hour command and control coverage of the Asia-Pacific. Without additional capacity on the island, the exponential increase in technological devices, like GPS, smartphones, and high speed computing will cause the State of Hawaii and USPACOM to become increasingly vulnerable to communication degradation and/or outages.

The security and resilience of the communications network requires a collaborative effort that involves active participation by the government, academic institutions and the private sector. USPACOM is committed to working with the community to achieve these objectives.

Sincerely,

A handwritten signature in black ink, appearing to be "S.J. Locklear, III", is written over a horizontal line.

S. J. LOCKLEAR, III

Copy to:
Hawaii Governor David Ige



DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

No. 1 Capitol District Building, 250 South Hotel Street, 5th Floor, Honolulu, Hawaii 96813
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DAVID Y. IGE
GOVERNOR

LUIS P. SALAVERIA
DIRECTOR

MARY ALICE EVANS
DEPUTY DIRECTOR

Telephone: (808) 586-2355
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Written Statement of
LUIS P. SALAVERIA
Director

Department of Business, Economic Development and Tourism
before the

HOUSE COMMITTEE ON ECONOMIC DEVELOPMENT & BUSINESS

Tuesday, March 17, 2015
9:00 AM

State Capitol, Conference Room 312
in consideration of

SB 892, SD 2 **RELATING TO OMNIBUS HAWAII RESILIENCE** **AND SUSTAINABILITY STRATEGY.**

Chair Kawakami, Vice Chair Kong, and Members of the Committee.

The Department of Business, Economic Development and Tourism (DBEDT) supports the intent of SB 892, SD 2, provided that its passage does not replace or adversely impact priorities in the Executive Budget. Sections 3 and 4 of the bill appropriate funding in the area of broadband.

Section 3 appropriates funds for the Hawaii Broadband Initiative (HBI), a strategy to increase Hawaii's broadband capacity through public and private sector actions. Increasing broadband critical infrastructure is a necessary step in supporting research and development of a resilient and sustainable Hawaii. DBEDT and the High Technology Development Corporation (HTDC) believe broadband is critical to businesses and the growth of Hawaii's economy. If this measure is adopted, DBEDT and HTDC will work with the Legislature to update the HBI. Funds would be used to bring potential partners together to assess current opportunities.

Section 4 authorizes the director of Finance to issue general obligation bonds for the preparation of environmental impact statements and the design and construction of seven broadband cable landing sites. DBEDT contracted for a specifications study which determined the preferred system specifications for military and business; and provided preliminary estimates for costs of planning, design and construction. DBEDT is assessing the various financing options available to build landing sites. The State could partner with the private sector for the operation of the landing sites.

We defer to the other departments for comments on portions that are related to their programs. Thank you for the opportunity to offer these comments.

STATE OF HAWAII
DEPARTMENT OF DEFENSE
HAWAII EMERGENCY MANAGEMENT AGENCY

TESTIMONY ON SB 892

PRESENTATION TO
THE HOUSE COMMITTEE ON ECONOMIC DEVELOPMENT AND BUSINESS

BY

DOUG MAYNE
ADMINISTRATOR OF EMERGENCY MANAGEMENT
February 17, 2015

Chair Kawakami, Vice Chair Kong, and Members of the Committee.

I am Doug Mayne and I am the Administrator of the Hawaii Emergency Management Agency. I am testifying in **SUPPORT** of SB 892 with requested amendments.

Senate Bill 892 appropriates funding for the land acquisition, design and construction of many needed facilities to ensure the continued safety of the people of Hawaii. We support the intent of the legislature to provide support for these needed new facilities.

We request, however, that Part III, Section 6 of the bill be amended by removing "in Mililani high technology park". We have been in discussion for over 2 years with various entities who are interested in being part of a Joint Emergency Management Center. Placing it at the Mililani high technology park will cause several of the partners to pull out of the project.

Thank you for allowing me to testify in **SUPPORT** to SB 892 with amendments.

DAVID IGE
GOVERNOR



Elaine Young
Acting Director

SHAN TSUTSUI
LIEUTENANT GOVERNOR

**STATE OF HAWAII
DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS**

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HONOLULU, HAWAII 96813
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March 16, 2015

The Honorable Derek Kawakami, Chair
Committee on Economic Development
and Business
House of Representatives
State Capitol, Room 314
Honolulu, Hawaii 96813

LATE

Dear Chair Kawakami:

Subject: Senate Bill (SB) 892, Senate Draft (SD) 2
Relating to Omnibus Hawaii Resilience and Sustainability Strategy

I am Manuel P. Neves, Chair of the Hawaii State Fire Council (SFC) and Fire Chief of the Honolulu Fire Department (HFD). The SFC and the HFD support the intent of SB 892, SD2, which makes appropriations for a Hawaii resilience and sustainability strategy in the areas of broadband, joint emergency management, energy efficiency and smart grid, and water and sewer infrastructure.

We believe this measure seeks to improve first responder communications across jurisdictions and among different agencies. Having the ability to communicate quickly and effectively at an emergency incident is a critical component for effecting a successful outcome. Any step to secure funds for a state training facility would greatly enhance natural and manmade disaster preparedness that are currently not available to county first responders. We respectfully request consideration to participate in the center's planning phase.

The SFC and the HFD urge your committee's support on the passage of SB 892, SD2.

Should you have questions, please contact SFC Administrator Socrates Bratakos at 723-7105 or sbratakos@honolulu.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "MPN", with a stylized flourish at the end.

MANUEL P. NEVES
Chair

MPN/LR:clc

March 17, 2015

Representative Derek S.K. Kawakami
Chair, Committee on Economic Development & Business
Representative Sam Satoru Kong
Vice Chair, Committee on Economic Development & Business
Hearing on SB892 SD2
Relating to Omnibus Hawai'i Resilience and Sustainability Strategy
State Capitol, Conference Room 312



Aloha Chair Kawakami, Vice Chair Kong, and Committee Members,

Enterprise Honolulu stands in strong support of Senate Bill 892 SD2 that addresses our critical infrastructure needs in Hawaii.

The Economic Development Alliance of Hawaii, (including all Economic Development Boards throughout the State) will be assisting the State Office of Planning in the design and implementation of the next update to the Statewide Comprehensive Economic Development Strategy (CEDS) for 2015-2020.

The U.S. Department of Commerce - Economic Development Administration requires all states in the nation to conduct a five year update of the CEDS. Past CEDS conducted in Hawaii, produced a listing of potential projects in each county, rather than revealing the gaps in the ecosystem and defining an overall strategy for the state. The 2015-2020 CEDS will be focused on identifying gaps and strategies that enable long term economic recovery, including an emphasis on Hawaii's Resiliency.

Senate Bill 892 SD2 will support the planning and the attention needed to be given to designing a healthier future for Hawaii. I request that you please pass this measure.

Please feel free to contact me directly should you have any questions.

Sincerely,

Pono Shim
President and CEO
Enterprise Honolulu, Oahu Economic Development Board



ENTERPRISE
HONOLULU

THE BUSINESS CLIMATE OF PARADISE



LATE

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March 17, 2015

HEARING BEFORE THE
HOUSE COMMITTEE ON ECONOMIC DEVELOPMENT & BUSINESS

TESTIMONY ON SB 892 SD2
RELATING TO OMNIBUS HAWAII RESILIENCE AND SUSTAINABILITY STRATEGY

Room 312
9:00 AM

Aloha Chair Kawakami, Vice Chair Kong, and Members of the Committee:

I am Christopher Manfredi, President of the Hawaii Farm Bureau Federation (HFBF). Organized since 1948, the HFBF is comprised of 1,932 farm family members statewide, and serves as Hawaii's voice of agriculture to protect, advocate and advance the social, economic and educational interest of our diverse agricultural community.

Hawaii Farm Bureau **supports the intent of SB 892 SD 2 with comments.** Increasing Hawaii's sustainability by increasing our resiliency through the use of technology is a positive step forward. Hawaii's farmers and ranchers have historically faced challenges bouncing back from economic and environmental downturns.

Innovation is critical to agriculture's long term success thus enabling Hawaii's goals of increased self-sufficiency and sustainability. Hawaii's agricultural producers find themselves increasingly dependent upon technology to innovate new practices to remain competitive in an increasingly global marketplace. Yet, in certain rural areas, reliable broadband service is not available and basic tools offered by USDA to farmers on the continent are not similarly available to Hawaii's farmers and ranchers. Satellite imagery depicting your farm's plant health is available to farmers on the mainland, yet Hawaii farmers do not typically have access to similar information because we are on the edge of the satellite imagery. Including technology needs of agriculture within the scope of this measure is critical to provide farmers and ranchers proactive tools to meet Hawaii's goal of increased sustainability and to achieve competitiveness with our mainland counterparts.

Thank you for this opportunity to provide our opinion on this important matter.



Written Statement of
ROBBIE MELTON
Executive Director & CEO
High Technology Development Corporation
before the
HOUSE COMMITTEE ON ECONOMIC DEVELOPMENT & BUSINESS
Tuesday, March 17, 2015
9:00 a.m.
State Capitol, Conference Room 312
In consideration of

**SB892 SD2 RELATING TO OMNIBUS HAWAII RESILIENCE AND SUSTAINABILITY
STRATEGY.**

Chair Kawakami, Vice Chair Kong, and Members of the Committee on Economic Development & Business.

The High Technology Development Corporation (HTDC) **supports the intent** of SB892 SD2, relating to Hawaii's Resilience and Sustainability Strategy.

As part of HTDC's vision to create 80,000 new innovation jobs in Hawaii earning \$80,000 or more by 2030, HTDC supports initiatives aimed at improving Hawaii's high speed broadband infrastructure and improving Hawaii's reputation as a place to do business.

HTDC supports the intent of part II appropriating resources for the Hawaii broadband initiative and broadband cable landing sites. Prioritizing broadband infrastructure remains a commonality for successful economic development efforts nationwide like in Chattanooga, Kansas City and the Research Triangle. A 2014 study by the Fiber to the Home Council Americas suggests that "gigabit broadband communities have per capita GDP that is 1.1 percent higher than communities with little to no availability of gigabit services." Furthermore, broadband infrastructure is a key component for the two way communication required for the implementation of a smart grid and realizing its benefits of increased renewables, decreased fossil fuel consumption, and improved efficiencies. HTDC looks forward to working with the Department of Business, Economic Development and Tourism on these projects.

HTDC supports the intent of part III as we have been working with the Office of Information Management and Technology on the cybersecurity portion of this project at the Mililani High Tech Park site.

We defer to the appropriate departments regarding the budget impact. Thank you for the opportunity to offer these comments.

kong3

From: mailinglist@capitol.hawaii.gov
Sent: Sunday, March 15, 2015 1:08 PM
To: edbtestimony
Cc: amybrinker@mac.com
Subject: *Submitted testimony for SB892 on Mar 17, 2015 09:00AM*

SB892

Submitted on: 3/15/2015

Testimony for EDB on Mar 17, 2015 09:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Amy Brinker	Individual	Support	No

Comments:

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

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kong3

From: mailinglist@capitol.hawaii.gov
Sent: Friday, March 13, 2015 4:14 PM
To: edbtestimony
Cc: diane.ragone@gmail.com
Subject: *Submitted testimony for SB892 on Mar 17, 2015 09:00AM*

SB892

Submitted on: 3/13/2015

Testimony for EDB on Mar 17, 2015 09:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Diane Ragone	Individual	Support	No

Comments:

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

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Resilience by Design

17 March 2015

Representative Derek S.K. Kawakami, Committee on Economic Development and Business
Hearing on Senate Bill 892, Relating to Omnibus Hawaii Resilience and Sustainability Strategy

Professor Steve Chan, PhD
Chair, Swansea University Network/Relationship Science Analytics PhD Program
Director, Sensemaking- U.S. Pacific Command Fellowship,
Director, Pacific-Asia Institute for Resilience and Sustainability (AIRS)
4365 Executive Drive, Suite 670
San Diego, CA 92121

LATE

RE: Support for SB892

Dear Chair Kawakami and members,

Support for a bill that provides a strategy for developing broadband capacity and its applications for building more resilient critical infrastructure throughout the Hawaiian Islands is vital for the future vitality of the state. Broadband or high speed internet access can provide Hawaii an increased level of access to a wide range of resources, services, and products that can enhance the everyday life of citizens throughout the state in a variety of ways, such as:

- **Public Safety and Homeland Security:** Broadband enables interoperable broadband public safety networks, which connect first responders in an emergency, and allow emergency workers to communicate across disparate networks, between jurisdictions, and across different agencies – critical capabilities at the scene of an emergency. Police, fire, and emergency medical personnel can react to crises quickly, fostering cooperation among numerous public safety agencies. High speed Internet improves victim to responder communications by enabling instantaneous digital transmissions to and from members of a connected community.
- **Economic Development/E-Commerce:** Businesses need broadband to compete on a global level and seek out high-speed broadband access when choosing to grow their business. When it comes to finding jobs, or applying for jobs, broadband Internet access is essential. The FCC recently estimated that 80% of Fortune 500 companies only advertised for positions online. High-speed access accelerates business development, and provides new opportunities for innovation, expansion, and e-commerce. Communities that connect their residents create wealth and attract business investments.
- **Education:** Broadband Internet access levels the playing field when it comes to educational resources. Children in inner city neighborhood, affluent homes, and farm communities can all access the same resources. Textbook materials can be complemented with online resources, and children can access all of these materials from school and home.



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- **Healthcare:** Telehealth & Telemedicine have become an important element of efficient healthcare delivery, which promotes better patient care, and even saves lives. With medical costs rising, and the availability of insurance limited, the costs saving benefits of telemedicine are also important. Broadband facilitates efficiency in healthcare delivery and creates opportunities for doctors and healthcare specialists to work together as a virtual team – with specialists located in any part of the world. A family practitioner in a small rural town can send medical images of a patient, to a specialist in any part of the world for an instant expert consultation. Test results from a hospital emergency room or laboratory can be sent to radiologist or doctor in seconds, making rapid diagnosis a reality, and doctors are also now sending prescriptions directly from their offices to pharmacies, greatly reducing errors, with automatic checking for interactions.
- **Communications:** Being digitally connected means communications can improve people's lives on the job, in their personal lives, and unite people with disabilities. Broadband empowers people with disabilities and removes barriers that keep them from participating in everyday activities. In addition to general communications social media also keeps people connected, and can facilitate meetings and communications, where face-to-face interaction was previously required. Broadband enables people to work from home, saving time and expenses, and the environment. Employers have been encouraging this concept to save overhead expenses and improve employee satisfaction. Smart Grid technology will also enable homeowners to monitor energy usage in real time, and adjust usage patterns to save energy costs and aid in conservation efforts. Energy conservation measures can be started, with real-time savings calculated.

Policy makers are now frequently defining broadband as a necessity, in the same category as electricity, water and phone service. Broadband is no longer a perk or special benefit. For communities, it is a critical piece of infrastructure for attracting new capital investment. As with electric service, the reliability of broadband service is heavily scrutinized to ensure the operation will not be placed offline (especially for information-intensive projects like data centers) or that the risk of being offline is minimal. The competitiveness of the service is also important. Locations with numerous providers have an advantage because competitiveness will drive up speeds and drive down cost.

Locations with inadequate connectivity are quickly passed over for projects requiring broadband. Communities lacking broadband infrastructure make the process of elimination easier for investment decision-makers and influencers. That said, merely having broadband likely places a location on a level playing field with other communities and having a robust plan for how broadband is integrated gives your community a competitive advantage. In today's landscape wherein "being connected" is central to becoming a critical node within the global supply chain, and particularly for the case whereby Hawaii desires to enhance its economic posture, the discussed broadband element of critical infrastructure is, perhaps, the key ingredient for all of Hawaii's future endeavors ranging from smart grid to becoming a cyber leader.

Very Respectfully,

Prof. Steve Chan, PhD

